DEPARTMENT OF COMMERCE

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ABBREVIATIONS

The necessary corrections to the List of Radio Stations of the United States and to the International List of Radiotelegraph Stations, appearing in this bulletin under the heading "Alterations and corrections," are published after the stations affected in the following order:

Name = Name of station.
Loc. = Geographical location. O = west longitude. N = north latitude. S = south latitude.
Call = Call letters assigned.
System = Radio system used and sparks per second.
Range = Normal range in nautical miles.
W. l. = Wave lengths assigned; normal wave lengths in italics.
Service = Nature of service maintained.
- FX = Point-to-point (fixed service).
- PG = General public.
- PR = Limited public.
- RC = Radio compass station.
- FS = Fog signal.
- P = Private.
- O = Government business exclusively.

Hours = Hours of operation:
- N = Continuous service.
- X = No regular hours.

F. T. Co. = Federal Telegraph Co.
I. R. T. Co. = Intercity Radio Telegraph Co.
I. W. T. C. = Independent Wireless Telegraph Co.
K. & C. = Kilbourne & Clark Manufacturing Co.
R. C. A. = Radio Corporation of America.
S. O. R. S. = Ship Owners' Radio Service.
U. R. Corp. = Universal Radio Corporation.
W. S. A. Co. = Wireless Specialty Apparatus Co.
C. w. = Continuous wave.
I. c. w. = Interrupted continuous wave.
Kc. = Kilocycles.
Fy. = Frequency.
A. c. = Alternating current.
V. t. = Vacuum tube.
U. S. L. = After operating company denotes that the change applies only to the List of Radio Stations of the United States.

[illegible]

RAME HEAD, ENGLAND, STATION AVAILABLE FOR COMPASS BEARINGS

Vessels approaching or entering Plymouth Sound, desirous of using their own radiocompass installations for the purpose of taking bearings of Rame Head station, call signal BYO, location lat. 50° 19′ N., long. 4° 13′ W. (approximately), should call that station in the usual manner and send the signal QTG. This request should be transmitted in advance at the correct routine period, either on 1,100 meters (spark) or 2,800 meters (c. w.), or the request may be made via any general post office coast radio station. Whatever method is used, the time at which the transmission of the signals is required for the purpose of taking a bearing should always be included in the message. These signals will only be transmitted by Rame Head radio station during the routine period for 1,100 meters (spark). Full details of the methods used for obtaining radio compass bearings, together with the regulations in force, are given in the Admiralty List of Wireless Signals, 1925 (British). A charge of 5 shillings is made for each transmission by Rame Head, in response to the signal QTG. This will be collected by the accountant-general of the Navy, Admiralty, S. W. 1. The Admiralty provide this service on the express condition that they incur no liability for any consequences resulting directly or indirectly from any inaccuracy in the signals transmitted, from any failure in the service, or from any other cause whatever.

Constant watch is maintained on 2,800 meters (c. w.), except as follows: On 1,100 meters (spark) from 18 to 30 minutes past each hour and to 0918 and 2018 when the station retransmits the radio weather bulletin for shipping.—(*Admiralty Notice to Mariners, No. 1802, 1925—British.*)

RADIO FOG SIGNALS TO BE ESTABLISHED ON THE GREAT LAKES

About the 15th of the current month the Lighthouse Service will establish radio fog signals at Whitefish Point Light Station, Mich., and Detour Light Station, Mich. Characteristic of Whitefish Point signal: Sounds every 105 seconds; one dash repeated for 60 seconds, silent 45 seconds, thus:

— — — — — — etc. (60 seconds) — Silent (45 seconds)

Location, 0.84° 57′ 26″, N. 46° 46′ 17″.

Characteristic of Detour Light station signal: Sound every 120 seconds; groups of 4 dashes for 60 seconds; silent 60 seconds, thus:

— — — — — — — — etc. (60 seconds) — Silent (60 seconds)

Location 0. 83° 54′ 55″, N. 45° 57′ 22″.

These stations will transmit radio fog signals during thick or foggy weather, on 1,000 meters, also daily in clear weather from 9 to 9.30 a. m. and from 3 to 3.30 p. m., ninetieth meridian. They will not maintain radio communication service.

USE OF 300 AND 450 METERS BY CANADIAN COAST AND SHIP STATIONS

Canadian coast and ship stations are no longer authorized to use the 300 meter wave length. Canadian ship stations should only use the 450 meter wave length for communication with British or European radio compass stations. All other stations should not enter in communication with Canadian ship stations on 450 meters.

CHANGE IN RATES FOR FRENCH STATIONS

The International Bureau of the Telegraph Union, Radiotelegraph Service, has informed this office that the International List of Radiotelegraph Stations, tenth edition, page 425, under the title "France," should be changed as follows:

Ordinary radiograms, 20 centimes per word, minimum, 2 francs, plus a fixed surcharge of 50 centimes per radiogram.

Urgent radiograms, 60 centimes per word, minimum, 6 francs, plus a fixed surcharge of 50 centimes per radiogram.

These rates are effective from July 16, last.

ALESUND, NORWAY, STATION OPEN

The radiotelegraph and radiotelephone coast station located at the above-named place, geographical location 6° 09′ 30″ E. (Greenwich), 62° 28′ 20″ N., call signal, LDM, is now open for general public service. The range of the c. w. modulated telephone system (Telefunken) is 400 miles, wave length, 512 meters, and the range of the c. w. v. t. telegraph system (Telefunken) is 600 miles, wave length 450 and 600 meters. Hours, 9–13, 16–19:30; holidays, 8–10 (Central Europe time). Coast rate, 30 centimes per word, minimum, 3 francs. In addition, the station gives to ships upon request, information relative to icebergs, navigation, and meteorological conditions. The rate charged for this service (request and response) is 4 francs, 50 centimes.

OFFICIAL TIME FOR CUBA

This country on July 19, last, adopted seventy-fifth meridian time, west of Greenwich.

Canadian amateur broadcasting stations

Call signal	Owner	Location
10AS	Moose Jaw Radio Association	Moose Jaw, Saskatchewan.
10AE	Bowmanville Radio Club	Bowmanville, Ontario.
10AJ	Tillsonburg Radio Club	Tillsonburg, Ontario.
10AS	Radio Association of Charlottetown	Charlottetown, Prince Edward Island.
10AY	Kelowna Radio Association	Kelowna, British Columbia.
10BA	Glace Bay Radio Club	Glace Bay, Nova Scotia.
10BF	Chatham Radio Club	Chatham, Ontario.
10BO	Alvinston Radio Club	Alvinston, Ontario.
10BR	Saskatoon Radio Club	Saskatoon, Saskatchewan.
10BI	Prince Albert Radio Club	Prince Albert, Saskatchewan.
10BJ	Halifax Radio Club	Halifax, Nova Scotia.

NOTE.—All of the above-named stations transmit on 200 meters.

CHANGE IN SCHEDULE OF BALBOA, PANAMA, FOR TRANSMITTING PRESS, TIME, AND HYDROGRAPHIC INFORMATION

This station now transmits press and hydrographic at 0500, time and hydrographic at 1200, and time at 2300, seventy-fifth meridian time.

LOCATION OF CANSO, NOVA SCOTIA, COMPASS STATION

This station is located on an 80-foot hill, 700 yards west of Glasgow Head, in latitude 45° 19′ 24″ N., longitude 60° 58′ 10″ W.

NEW LIST OF AMATEUR RADIO STATIONS

The annual list of Amateur Radio Stations of the United States, edition June 30, 1925, is now available for distribution by the Superintendent of Documents, Goverment Printing Office, Washington, D. C., price 25 cents per copy.

Remittances for publications should not be forwarded to the Bureau of Navigation or to any of the field offices of the bureau.

LOST COMMERCIAL RADIO OPERATORS' LICENSES

Printed below is a list of radio operators' licenses which have been reported to this bureau as having been lost. Should any of them be found, they should be returned to the bureau for cancellation. Inspectors and others concerned should see that lost licenses are not being used by unauthorized persons.

Name	Class	Number	Date issued	Port issued
Anderson, Edward	First	11969	Jan. 6, 1925	San Francisco.
Barton, Charles G.	do	7961	Jan. 16, 1925	Seattle.
Bradner, Paul K.	do	12209	Oct. 16, 1924	New York.
Brock, James K.	do	3853	Jan. 10, 1923	Baltimore.
Candido, James V.	do	8874	Aug. 1, 1923	New York.
Cannon, Howard J.	do	9306	Feb. 13, 1924	New Orleans.
Cochran, Richard U.	do	5759	Sept. 28, 1923	Detroit.
Delgado, Paul	do	66	Aug. 15, 1923	Washington.
Dockum, Charles R.	do	9264	Mar. 26, 1924	New Orleans.
Du Pre, J. J.	do	10706	Oct. 24, 1923	Atlanta.
Durand, Frank P.	do	7904	Nov. 3, 1922	Chicago.
Ellingham, Irving	do	6870	July 20, 1923	New York.
Engle, Charles	do	10911	Dec. 7, 1923	Do.
Ensor, Marshall H.	Second	4273	July 16, 1925	Chicago.
Farrell, James F.	First	24677	Aug. 6, 1924	New York.
Ferguson, Chester R.	do	3628	Nov. 28, 1924	San Francisco.
Gardner, Harry E.	Second	2376	July 16, 1923	Seattle.
Garrett, William L., Jr.	First	8082	Feb. 27, 1923	New York.
Goldberg, Frank	do	8543	Mar. 18, 1923	Do.
Goldman, Jacob L.	do	12289	Nov. 20, 1924	Do.
Gomez, Raymond	do	7285	Nov. 26, 1923	San Francisco.
Hilgedick, Winfred C.	do	8837	Oct. 24, 1924	Chicago.
Johnson, William K.	do	9986	Oct. 26, 1923	New York.
Jones, Lloyd W.	do	7907	Sept. 16, 1924	Seattle.
Kotcher, Sara	do	8647	Mar. 21, 1923	New York.
Monahan, Charles J.	do	12434	Feb. 28, 1925	Do.
Newton, O. A.	do	10063	June 21, 1924	Seattle.
O'Donnell, Cornelius P.	do	9923	Mar. 8, 1924	New Orleans.
O'Dowd, Joseph T.	do	9063	Mar. 4, 1924	Chicago.
Peck, W. G.	do	60	Aug. 14, 1923	Washington.
Reisinger, Isom F.	do	10848	Sept. 1, 1924	Atlanta.
Rohwer, Paul G.	do	6809	Mar. 16, 1925	Chicago.
Schatt, Maurice	do	11175	Sept. 22, 1924	New Orleans.
Schulsinger, Max	do	9418	Nov. 16, 1923	Do.
Siegel, Maurice	do	8715	May 6, 1923	New York.
Shumway, Stanley R.	do	26140	Feb. 28, 1924	Do.
Simson, A. Gail	do	4569	Jan. 4, 1923	Seattle.
Spears, Harry	do	10061	Jan. 22, 1924	New York.
Stanman, Elmer J.	do	9097	Mar. 10, 1924	Boston.
Sturley, George	do	7981	Nov. 28, 1924	Seattle.
Southworth, Francis G.	do	10796	May 17, 1924	New York.
Swerdloff, Herman	do	10704	Apr. 7, 1924	Do.
Thompson, O. S.	do	10608	June 26, 1924	Seattle.
Vanen, John D.	do	7984	Mar. 9, 1925	Do.
Vida, Albert M.	do	9806	Oct. 9, 1923	New York.
Waller, Grimes R.	do	11168	Nov. 14, 1924	New Orleans.
Waugh, Harry L.	Second	4124	Aug. 24, 1922	Chicago.
Wickizer, Gilbert S.	First	10837	June 19, 1924	New York.
Wilson, Rollin V.	Second	5669	June 8, 1920	Atlanta.

USE OF 300 AND 450 METERS RESTRICTED BY NEWFOUNDLAND

The Newfoundland Government will prohibit ships registered in Newfoundland from using the wave lengths of 300 and 450 meters after October 1, this year, within 250 miles of the coast of the United States, on condition that the United States will from October 1 similarly prohibit its ships from using wave lengths within 250 miles of the coast of Newfoundland.

This department has signified that it is agreeable to the conditions indicated and accordingly all radio operators of United States vessels are not allowed the use of these wave lengths, effective October 1, when within 250 miles of the coasts of Newfoundland or of the United States.

ELECTRICAL INTERFERENCE WITH RADIO RECEPTION

In some localities radio reception is seriously disturbed by interference arising from electrical apparatus in the vicinity. Part of the disturbance from electrical devices is practically inevitable and must be regarded like atmospheric disturbances as part of the inherent limitation of radio reception. Some electical devices when in perfect working order cause disturbances which result in interference with radio reception, while other devices cause interference because of their faulty operation. The only general remedy for electrical interference is cooperative effort on the part of users of radio, users and owners of the electrical sources of disturbance, and distributers of electrical power to reduce or eliminate the causes of the trouble. In many cases it is possible to provide filters, shields, chokes, etc., either at the source of disturbance or at the receiving set, which do much to relieve the difficulties.

A brief outline of the sources of such interference and the methods usually used in mitigation is given in Letter Circular No. 182, just issued by the Bureau of Standards. A copy of this circular may be obtained upon application to the Bureau of Standards, Washington, D. C.

SPECIFICATIONS FOR RADIO FREQUENCY INDICATOR, TYPE B

In May, 1924, the Bureau of Standards issued specifications for radio frequency indicator, type B. This frequency indicator was designed to be used in a radio transmitting station to indicate to the operator that the transmitting frequency assigned to the station is being accurately maintained. A number of these instruments have been built by various transmitting stations and calibrated by the Bureau of Standards. Experience with these have suggested several changes which improve the frequency indicator and the specifications have been revised to include the results of this experience. These specifications give complete details for construction.

The frequency indicator is essentially a one-point frequency meter (wavemeter). When the deflection instrument of the frequency indicator gives maximum deflection for the pointer set at the fiducial mark on the top of the device, the transmitting set is known to be operating at the frequency to which the frequency indicator is adjusted. The bureau will calibrate and adjust only radio frequency indicators which are to be used to maintain a radio transmitting station on its assigned frequency. A fee of $5 is charged for adjusting frequency indicators which are built according to these specifications. A copy of the "Specifications for a radio frequency indicator, type B," Letter Circular No. 180, may be obtained upon application to the Bureau of Standards, Washington, D. C.

STANDARD RADIO FREQUENCY TRANSMISSIONS, OCTOBER TO JANUARY

The Bureau of Standards transmits, twice a month, radio signals of definitely announced frequencies, for use by the public in standardizing frequency meters (wavemeters) and transmitting and receiving apparatus. The signals are transmitted from the bureau station WWV, Washington, D. C., and from station 6XBM, Stanford University, Calif.

The transmissions are by unmodulated continuous-wave radio telegraphy. A complete frequency transmission includes a "general call," a "standard frequency signal," and "announcements." The "general call" is given at the beginning of the eight-minute period and continues for about two minutes. This includes a statement of the frequency. The "standard frequency signal" is a series of very long dashes with the call letters (WWV or 6XBM) intervening. This signal continues for about four minutes. The "announcements" are on the same frequency as the "standard frequency signal" just transmitted and contain a statement of the frequency. An announcement of the next frequency to be transmitted is then given. There is then a four-minute interval while the transmitting set is adjusted for the next frequency.

The signals can be heard and utilized by stations equipped for continuous-wave reception at distances within about 500 to 1,000 miles from the transmitting stations. Information on how to receive and utilize the signals is given in Bureau of Standards letter circular No. 171, which may be obtained on application from the Bureau of Standards, Washington, D. C. Even though only a few points are received, persons can obtain as complete a wavemeter calibration as desired by the method of generator harmonics, information on which is given in the letter circular.

The schedule of standard frequency signals from both the Bureau of Standards and Stanford University is as follows:

Schedule of Frequencies in Kilocycles

[Approximate wave lengths in meters in parentheses]

Time *	Oct. 5	Oct. 20	Nov. 5	Nov. 20	Dec. 5	Dec. 19	Jan. 5	Jan. 20
10 to 10.08 p. m.	550 (545)	1,500 (200)	3,000 (100)	125 (2,400)	300 (1,000)	550 (545)	1,500 (200)	3,000 (100)
10.12 to 10.20 p. m.	630 (476)	1,650 (182)	3,300 (91)	135 (2,224)	315 (952)	630 (476)	1,650 (182)	3,300 (91)
10.24 to 10.32 p. m.	730 (411)	1,800 (167)	3,600 (83)	145 (2,097)	345 (869)	730 (411)	1,800 (167)	3,600 (83)
10.36 to 10.44 p. m.	850 (355)	2,000 (150)	4,000 (75)	165 (1,994)	375 (800)	850 (353)	2,000 (150)	4,000 (75)
10.48 to 10.56 p. m.	980 (306)	2,200 (136)	4,400 (68)	166.5 (1,809)	425 (785)	980 (306)	2,200 (136)	4,400 (68)
11 to 11.08 p. m.	1,150 (265)	2,450 (122)	4,900 (61)	205 (1,463)	500 (600)	1,150 (265)	2,450 (122)	4,900 (61)
11.12 to 11.20 p. m.	1,300 (231)	2,700 (111)	5,400 (55)	260 (1,153)	660 (540)	1,300 (231)	2,700 (111)	5,400 (55)
11.24 to 11.32 p. m.	1,500 (200)	3,000 (100)	6,000 (50)	315 (952)	666 (450)	1,500 (200)	3,000 (100)	6,000 (50)

* Eastern standard time for WWV, Washington, D. C.; Pacific standard time for 6XDM, California.

STANDARD FREQUENCY STATIONS

As a result of measurements by the Bureau of Standards upon the transmitted waves of a limited number of radio transmitting stations, data are given in each month's Radio Service Bulletin on such of these stations as have been found to maintain a sufficiently constant frequency to be useful as frequency standards. There may be many other stations maintaining their frequency just as constant as these, but these are the only ones among those observed. There is, of course, no actual guaranty that the stations named below will maintain the constancy shown, but the data indicate the high degree of confidence that can be placed in them. The transmitted frequencies from these stations can be utilized for standardizing frequency meters (wavemeters) and other apparatus by the procedure given in Bureau of Standards letter circular No. 92, "Radio signals of standard frequency and their utilization," and in Bureau of Standards letter circular No. 171, "Requirements, construction and operation of apparatus for measurement of the frequencies of distant radio transmitting stations." A copy of either letter circular can be obtained by a person having actual use for it upon application to the Bureau of Standards, Department of Commerce, Washington, D. C.

Station	Owner	Location	Assigned frequency (kilocycles)	Period covered by measurements (months)	Number of times measured	Deviations from assigned frequencies noted in measurements: Average	Deviations from assigned frequencies noted in measurements: Greatest since Aug. 20, 1926
						Per cent	Per cent
WQL	Radio Corporation of America.	Coram Hill, Long Island, N. Y.	17.13	9	68	0.2	0.3
NSS	United States Navy	Annapolis, Md	17.30	26	195	.2	.7
WCI	Radio Corporation of America.	Barnegat, N. J.	17.96	7	35	.1	.4
WGG	do	Tuckerton, No. 1, N. J.	18.86	15	196	.1	.8
WII	do	New Brunswick, N. J.	21.80	5	42	.1	.5
WRT	do	do	22.60	5	17	.2	.3
WVA	United States Army	Annapolis, Md	100	6	78	.1	.9
WEAF	American Telephone & Telegraph Co.	New York, N. Y.	510	9	74	.0	.6
WCAP	Chesapeake & Potomac Telephone Co.	Washington, D. C.	640	24	186	.1	.2
WRC	Radio Corporation of America.	do	640	23	95	.1	.3
WSB	Atlanta Journal	Atlanta, Ga.	700	24	104	.2	.7
WGY	General Electric Co.	Schenectady, N. Y.	790	27	141	.1	.9
WBZ	Westinghouse Electric & Manufacturing Co.	Springfield, Mass.	920	17	88	.1	.5
KDKA	do	East Pittsburgh, Pa.	970	21	170	.1	.2

REFERENCES TO CURRENT RADIO PERIODICAL LITERATURE

This is a monthly list of references prepared by the Radio Laboratory of the Bureau of Standards, and is intended to cover the more important papers of interest to the professional radio engineers which have recently appeared in technical periodicals. The number at the left of each reference classifies the reference by subject, in accordance with the scheme presented in "A decimal classification of radio subjects—An extension of the Dewey system," circular No. 138, a copy of which may be obtained for 10 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C. Further information about these lists, availabilities of previous lists and of the several periodicals is contained in the extended statement preceding the early lists and published in the Radio Service Bulletin prior to April, 1923, and also in May and September, 1923.

R100.—*Radio Principles*

R110 Nichols, H. W. and Shelleng, J. C. How earth magnetism affects radio waves. Popular Radio, 8, pp. 309-316, October, 1925.

R110 Eve, A. S. On recent advances in wireless propagation both in theory and practice. Journal Franklin Institute, 200, pp. 327-333, September, 1925.

R110 Alexanderson, E. F. W. The behavior of radio waves. Radio News, 7, pp. 410-411, October, 1925.

R110 Morecroft, J. H. The march of radio: The horizontally polarized wave. Radio Broadcast, 7, pp. 752-742, October, 1925.

R110 de Tunzelman, G. W. Radio propagation (mostly mathematical). Electrician (London), 95, pp. 56-57, July 17, 1925.

R113.1 Chapman, S. R. Investigation on fading of signals. Experimental Wireless (London), 3, pp. 775-779, September, 1925.

R113.6 Smith-Rose, R. L. and Barfield, R. H. Some measurements on wireless wave fronts. Experimental Wireless (London), 3, pp. 737-740, September, 1925.

R114 Diagramme de champs electriques mesures a Meudon pendant le premier trimestre 1925. L'Onde Electrique, 4, pp. 350-352, August, 1925.

R116 Woodruff, E. C. Practical Lecher wires. QST, 9, pp. 11-13, September, 1925.

R120 Jacobs, C. F. Antenna spreader. United States Patent No. 1,549,264, issued September 8, 1925.

R124 Gould, L. E. Loop for radioreception. United States Patent No. 1,553,715, issued September 15, 1925.

R131 The electrical characteristics of all types of radiotrons and rectrons will be found in this table. New York Herald-Tribune radio section, p. 6, August 28, 1925.

R134.75 McLaughlin, J. L. How to build the new superheterodyne with a single control. Popular Radio, 8, pp. 350-361, October, 1925.

R134.73 Best, G. M. The modified Best superheterodyne (all wave 7 tube). Radio (San Francisco), 7, pp. 11-16, August; pp. 12-18, September, 1925.

R136 Sanderson, E. K. and Kipping, N. Distortion in wireless telephony and related applications of the cathode-ray tube. Experimental Wireless (London), 3, pp. 757-764, September, 1925.

R200.—Radio measurements and circuit-elements

R214 Nancarrow, F. E. Quartz crystal resonators. Post Office Electrical Engineers Journal (London), 18, pp. 169-174, July, 1925.

R214 Round, H. J. and Rust, N. M. New facts about oscillating crystals. Wireless World & Radio Review, 17, pp. 217-218, August 19, 1925.

R251 Rogers, M. T. Electrical instruments for radio sets. Radio (San Francisco), 7, pp. 25-28, September, 1925.

R251 Dannatt, C. Dielectric loss measurements on commercial insulating materials. World Power (London), 4, pp. 141-145, September, 1925.

R300.—*Radio apparatus and equipment*

R330 Bavasai, C. B. Hard tubes and soft tubes as amplifiers and detectors. Radio News, 7, pp. 434-435, October, 1925.

R330 Canadian McCullough a. c. radio tube. Radio (Canada), 9, p. 51, August, 1925.

R331 Holst, G. and Oosterhuis, E. Electron-discharge device. United States Patent No. 1,550,505, issued September 8, 1925.

R331 Weinhart, H. W. Electric discharge device. United States Patent No. 1,550,765, issued August 25, 1925.

R331 Hennelly, E. F. Electron device. United States Patent No. 1,551,391, issued August 25, 1925.

R331 Kayko, C. J. Electrode for discharge tubes. United States Patent No. 1,552,310, issued September 1, 1925.

R339 Mercer, O. G. Vacuum tube circuits. United States Patent No. 1,553,379, issued September 1, 1925.

R340 Rowe, F. C. Tuning coil and condenser mounting for radio receiver. United States Patent No. 1,552,362, issued September 8, 1925.

R342.18 Kruse, R. S. High ratio and high amplification. QST, 9, pp. 27-30, September, 1925.

R342.7 Best, G. M. Future developments in audio frequency amplifiers. Radio (San Francisco), 7, p. 19, September, 1925.

R342.7 Tilden, L. A. and Knudsen, C. Telephone amplifier. United States Patent No. 1,552,770, issued September 8, 1925.

R342.7 Cross, G. C. Jr. Some remarks on audio amplification. Radio Broadcast, 7, pp. 745-750, October, 1925.

R343 Christiani, F. Radio receiving set. United States Patent No. 1,551,057, issued August 25, 1925.

R343 Henney, K. New developments and experiments with receiving circuits. Radio Broadcast, 7, pp. 725-731, October, 1925.

R343.7 Loye, D. P. Radio receiving circuits. United States Patent No. 1,551,578, issued September 1, 1925.

R344 Schelleng, J. C. Circuits for wave transmission. United States Patent No. 1,551,624, issued September 1, 1925.

R344 Fessenden, R. A. Method and apparatus for generating electrical oscillations. United States Patent No. 1,553,152, issued September 8, 1925.

R344.3 Hoffman, W. H. A power amplifier transmitter for the low waves. QST, 9, pp. 20-23, September, 1925.
R344.3 Sarnow, F. Kurzwellensender. Die Radio Handler, pp. 320-321, August 18, 1925.
R345 Martin, deL. M. Radio repeating system. United States Patent No. 1,559,464, issued September 15, 1925.
R374 Popper, E. L. Crystal detector. United States Patent No. 1,551,843, issued September 1, 1925.
R374 Colebrook, F. M. Crystal detectors: The electrical properties of contact rectifiers. Wireless World & Radio Review, 17, pp. 293-298, September 2, 1925.
R378.4 Rice, C. W. and Kellogg, E. W. Notes on the development of a new type of hornless loud speaker. Journal American Institute of Electrical Engineers, 44, pp. 982-991, September, 1925.
R381 Harris, S. How to compare losses in condensers. Popular Radio, 8, pp. 341-346, October, 1925.
R381 Harris, S. Does a straight-line frequency condenser exist? Radio News, 7, p. 447, October, 1925.
R381 Hill, C. G. Variable condenser. United States Patent No. 1,561,061, issued September 1, 1925.
R381 Alcox, R. S. Condenser. United States Patent No. 1,552,183, issued September 1, 1925.
R381 Bradley, F. O. Tuning unit for radio receiving sets. United States Patent No. 1,552,366, issued September 1, 1925.
R381 Friess, W. H. Condenser. United States Patent No. 1,553,549, issued September 15, 1925.
R381 Apostol, S. D. Condenser. United States Patent No. 1,553,971, issued September 15, 1925.
R383 Burchill, G. H. Designing the secondary coil (simple chart for measuring inductance and wave length). QST, 9, pp. 16-17, September, 1925.
R383 Butterworth, S. The design of inductance coils having a rectangular winding section. Experimental Wireless (London), 9, pp. 730-736, September, 1925.
R384 Berry, E. W. All about filters. Radio News, 7, pp. 452-453 and 446-476, October, 1925.
R388 A note on the cathode-ray oscillograph. Experimental [illegible] (London), 9, pp. 766-766, September, 1925.

R400.—*Radio Communication Systems*

R402 Some notes on 20-meter work. Experimental Wireless (London), 9, pp. 767-771, September, 1925.
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V

NEW STATIONS

Commercial land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1925, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave lengths	Service	Hours	Station controlled by—
Hialeah, Fla.[1]	WAX	600, 625, 1000, 2175	PG	N	T. R. T. Co.
New Brunswick, N. J.[2]	WIK	23	FX	N	R. C. A.

[1] Loc. (approximately) 0.50° 17′ 00″, N. 25° 49′ 00″; range, 800; system, composite v. t. telegraph; rates, ship service 10 cents (52 centimes) per word.
[2] Loc. 0.74° 39′ 15″, N. 40° 30′ 10″; range, 4,000; system, General Electric Co. v. t. telegraph; this station communicates with Buenos Aires, Berlin, and Paris.

Commercial ship stations, alphabetically by names of vessels

[Additions to the List of Radio Stations of the United States, edition of June 30, 1925, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Name of vessel	Call signal	Rates	Service	Hours	Owner of vessel	Station controlled by—
Albatross	KFXN		PG	X	James A. Ross	
Arcturus[1]	KFXV		PG	X	Interlake Steamship Co.	Michigan Limestone & Chemical Co.
A. W. Colton	KFXS		PG	X	Great Lakes Towing Co.	
Charles C. West	KFXK		PG	X	Rockport Steamship Co.	
Federal	WDOO	8	PG	X	United States Shipping Board	R. C. A.
Homestead[2]	KEKR	8	PG	X	do	Do.
J. A. Campbell	KFXQ		PG	X	Interlake Steamship Co.	
John A. Topping	KFXG		PG	X	Columbia Steamship Co.	
Laurentian	KDTX				Russell A. Alger	
L. D. Potter[3]	KFSJ	8	PG	X	L. D. Potter	Owner of vessel.
Muroma[4]	KFXO		P	X	Crosley Radio Corporation	Do.
Shadow K.	KFXT				Consolidated Shipbuilding Corporation.	
Tyee[5]	KFXP		P	X	Hobble Towing Co.	Do.
West Canon[6]	KDCV	8	PG	X	United States Shipping Board	
Wynoka[7]	KFXI		P	X	Inland & Coastwise Waterways Corporation.	Do.

[1] Range, 150; system, Cutting & Washington, 1000; w. l., 715, 875; rates, Great Lakes service, 4 cents per word.
[2] Range, 300; system, Navy, 1000; w. l., 450, 600, 700.
[3] Range, 200; system, Navy-Simon, 1000; w. l., 450, 600, 700, 800.
[4] Range, 10; system, R. C. A. v. t. telephone & telegraph; w. l., 100, 110, 600.
[5] Range, 150; system, Navy-Lowenstein, 1000; w. l., 600, 700.
[6] Range, 300; system, Federal arc; w. l., 600, 700, 800, 1000, 2100, 2400.
[7] Range, 300; system, R. C. A., 1000; w. l., 600, 1100.

Commercial land and ship stations, alphabetically by call signals

[b, ship station; c, land station]

Call signal	Name of station		Call signal	Name of station	
KDCV	West Canon	b	KFXP	Tyee	b
KDTX	Laurentian	b	KFXQ	J. A. Campbell	b
KEKR	Homestead	b	KFXS	A. W. Colton	b
KFSJ	L. D. Potter	b	KFXT	Shadow K.	b
KFXG	John A. Topping	b	KFXV	Arcturus	b
KFXI	Wynoka	b	WAX	Hialeah, Fla.	c
KFXK	Charles C. West	b	WDOO	Federal	b
KFXN	Albatross	b	WIK	New Brunswick, N. J.	c
KFXO	Muroma	b			

Broadcasting stations, alphabetically by names of States and cities

[Additions to the List of Radio Stations of the United States, edition of June 30, 1925]

State and city	Call signal	State and city	Call signal
Colorado: Denver (portable)	KFXJ	North Carolina: Charlotte	WJBO
Illinois:		Oklahoma: Fort Sill	KFRM
Chicago (portable)	WBBZ	Oregon: Portland	KTBR
Decatur	WJBL	Pennsylvania: Harrisburg	WPRO
Joliet	WKBB	Tennessee: Nashville	WDAD
Mount Prospect	WJAZ	Texas:	
New Hampshire: Hanover	WDCH	Beaumont	KFXM
New York:		El Paso	KFXH
Bay Shore	WRST	Virginia: Arlington	NAA
Brooklyn	WFRL	Wyoming: Laramie	KFBU
New York	WBNY		

Stations broadcasting market or weather reports, music, concerts, lectures, etc., alphabetically by call signals

Call signal	Location of station (address)	Owner of station	Power (watts)	Wave length	Frequency (kilocycles)
KFBU	Laramie, Wyo., The Cathedral	Bishop N. S. Thomas	500	275	1,090
KFRM	Fort Sill, Okla	Lieut. James P. Boland	50	242	1,240
KFXH	El Paso, Tex., 2827 Montana Street.	Electric Radio Co	50	242	1,240
KFXJ	Denver, Colo. (portable), 917 Fourteenth Street.	Mountain States Radio Distributors (Inc.)	10	242.7	1,230
KFXM	Beaumont, Tex., 250 Crockett Street.	Neches Electric Co	10	227	1,320
KTBR	Portland, Oreg., 172 Tenth Street	Brown's Radio Shop	50	263	1,140
NAA	Arlington, Va	United States Navy	1,000	434.8	690
WBBZ	Chicago, Ill. (portable), 1035 North American Building	O. L. Carroll	50	215.7	1,390
WBNY	New York, N. Y., 1400 Broadway	Shirley Katz	500	229.7	1,430
WDAD	Nashville, Tenn., 149 Eighth Avenue, North.	Dad's Auto Accessories (Inc.)	100	220	1,360
WDCH	Hanover, N. H	Dartmouth College	100	256	1,170
WFRL	Brooklyn, N. Y., 1421 East Tenth Street.	Robert M. Leary and James A. Beegner (Flatbush Radio Laboratories)	100	256.4	1,170
WJAZ	Mount Prospect, Ill., 212 South Michigan Avenue.	Zenith Radio Corporation	1,500	322.4	930
WJBO	Charlotte, N. C., 7 West Fourth Street.	Interstate Radio (Inc.)	10	226	1,340
WJBL	Decatur, Ill., 204 North Water Street.	William Gushard Dry Goods Co.	500	270	1,110
WKBB	Joliet, Ill., 607 Jefferson Street	Sanders Brothers	100	234.2	1,470
WPRO	Harrisburg, Pa., Fifth and Keller Streets.	Wilson Printing & Radio Co	100	275.7	1,090
WRST	Bay Shore, N. Y., 1 First Avenue	Radiotel Manufacturing Co	250	215.7	1,390

Government land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1925, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by—
Cape Henry, Va. (section base 2)	NHG		O	N	United States Coast Guard.
Middletown, Pa	WYU	1,000	O	K	United States Army.
Radio test car No. 1 (portable)	WWA		O	K	Department of Commerce, Bureau of Navigation.
Woods Hole, Mass. (section base 18)	NGF		O	N	United States Coast Guard.

Government ship stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1926, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by—
Aldebaran	WYCU	700	O	X	United States Army.

Government land and ship stations, alphabetically by call signals

[b—ship station; c—land station]

Call signal	Name of station		Call signal	Name of station	
NGF	Woods Hole, Mass. (section base 10)	a	WYCU	Aldebaran	b
NHO	Cape Henry, Va. (section base 8)	c	WYU	Middletown, Pa.	b
WWA	Radio test car No. 1 (portable)	c			

Special land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1926]

Station	Call signal	Station controlled by—
Buffalo, N. Y.	8XAW	Interstate Radio Telegraph Co.
Clearwater, Fla.	4XD	George H. Bowles
Nashville, Tenn.	4XC	Nashville Life & Accident Insurance Co.
New York, N. Y.	2XW	Combs Bros.
Rogers, Mich.	8XAU	Michigan Limestone & Chemical Co.
Los Angeles, Calif.	6XA	Los Angeles Evening Express.

Special land stations grouped by districts

Call signal	District and station	Call signal	District and station
2XW	Second district: New York, N. Y.	6XA	Sixth district: Los Angeles, Calif.
	Fourth district		Eighth district
4XC	Nashville, Tenn.	8XAU	Rogers, Mich.
4XD	Clearwater, Fla.	8XAW	Buffalo, N. Y.

ALTERATIONS AND CORRECTIONS

COMMERCIAL LAND STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1926, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

BEAUMONT, TEX.—System, Western Electric Co. v. t. telegraph and composite spark, 1,000.

BIRMINGPORT, ALA.—Controlled by Inland and Coastwise Waterways Corporation.

CHICAGO, ILL. (WGO).—W. l., 715, 875, 890, 1,578; controlled by Illinois Radio Corporation of America.

CLEARWATER, CALIF.—System, Federal, 1,000, w. l., 600, 720, rates, 8 cents per word (42 centimes).

DEARBORN, MICH.—W. l., strike out 600, add 715.

DETROIT, MICH. (WDYC).—W. l., 140.

DULUTH, MINN.—W. l., strike out 600, add 715.

HARRISBURG, PA.—Range, 50, w. l., 1,199 only.

MEMPHIS, TENN.—Controlled by Inland and Coastwise Waterways Corporation.
MIAMI, FLA.—Controlled by Florida Radio Telegraph Co. (E. G. Watts, jr.)
MOBILE, ALA. (WPP)—Controlled by Inland and Coastwise Waterways Corporation.
NEW YORK, N. Y. (WCC) Range, 150–300; system, I. W. T. Co. arc, Cutting & Washington spark, 1,000 and Marconi spark, 1,000.
PINCHEGUE, FLA. Controlled by Florida Radio Telegraph Co. (E. G. Watts, jr.)
PORT BRADSHAWS, ALASKA.—W. L., 600, 625 service, P.
ROCKY POINT, N. Y. (WQN) W. L. 51.5, 54.5, 57.
STANFORD UNIVERSITY, CALIF. System composite, v. f. telegraph.
TUCKERTON, N. J. WRC.—W. L. 600, 650, 2,200, 2,375.
WYANDOTTE, MICH.—W. L., add 715.
Strike out all particulars of the following-named stations: Miami Beach, Fla. (replaced by Hialeah, Fla.), Rochester, N. Y., Tullahoma, Tenn.

COMMERCIAL SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS

(Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 15, 1926, and to the International List of Radiotelegraph Stations, published by the Berne bureau)

ABNER.—W. L., 450, 600, 706, 800.
AMERICA. System, Federal arc and Navy R. C. A., 1,000, w. l., 450, 600, 706, 800, 1,800, 1,900, 2,000, 2,100, 2,400.
AMERICAN. Controlled by owner of vessel.
ARA. System, composite v. f. telegraph and composite spark, 1,000; w. l., 450, 600, 706, 800, 1,800, 2,400, 2,600.
ARAPAHOE.—System, R. C. A., 1,000, w. l. 600, 706, 800.
ARTIGAS. Controlled by I. W. T. Co. (U. S. L.).
ASHTABULA.—W. L., 715, 800, 875.
BALDBUTTE. Controlled by I. W. T. Co. (U. S. L.).
BARBADOES. Range, 150, system, R. C. A., 1,000, w. l., 600, 706, 715, 800, 875.
BAYMAN.—Range, 150; system, R. C. A., 1,000, w. l., 600, 706, 715, 800, 875.
BENJ. F. PACKARD.—Mandel Nieder owner of vessel.
BLUE TRIANGLE. System, Navy-Lowenstein, 1,000, w. l., 450, 600, 706, 800, Export S. S. Co. owner of vessel, controlled by I. W. T. Co.
BOGOTA.—System, I. W. T. Co., 1,000, w. l., 600, 706, 800.
BRADDOCK. Controlled by R. C. A. (U. S. L.).
CARRILLO.—W. L., 600, 706, 800.
CAPE HENLOPEN.—W. L., 600, 706, 800.
CATHWOOD.—W. L., 600, 706, 800.
CELLO.—Charles R. McCormick Lumber Co. owner of vessel.
CHARLES O. JARVIS.—Controlled by owner of vessel.
CHICKAMAUGA. Range, 150; system, Navy-Lowenstein, 1,000; w. l., 600, 706; rates, 5 cents per word.
CITY OF BANGOR.—W. L., 600, 706, 800.
CITY OF BENTON HARBOR.—System, R. C. A., 1,000, w. l., 715, Goodrich Transit Co. owner of vessel.
CITY OF DETROIT III. W. L., 715, 800, 875.
CITY OF FAIRBURY. Controlled by I. W. T. Co.
CITY OF FLINT.—Controlled by R. C. A. (U. S. L.).
CLONTARF.—W. L., 600, 706, 800, Export S. S. Corporation owner of vessel, controlled by I. W. T. Co.
COEUR D'ALENE. W. L., 600, 706, 800; Export S. S. Corporation owner of vessel, controlled by I. W. T. Co.
COLDWATER. Caro ina S. S. Corporation owner of vessel.
COLOMBIA. Panama Mail S. S. Co. owner of vessel.
COLTSA. W. L., 600, 706, 800.
COMET. Pan-American Petroleum & Transport Co. owner of vessel, controlled by owner of vessel.
DAVID MCKELVY. System, R. C. A. v. f. telegraph, w. l. 600, 706, 750, 800, 900.
DELISLE. W. L., add 2,000, 2,400; Baltimore Insular Line owner of vessel, controlled by P. T. Co.
DELPHINE.—System, R. C. A. v. f. telegraph, w. l., 715, 800, 1,800.
EDWARD L. DOHENY, JUNIOR. Name changed to R. W. Stewart.
ELDORADO. W. L., 600, 706, 800.
ETEVE. Ethyl [illegible]line Corporation owner of vessel.
EVERETT (KUQR). Charles R. McCormick Lumber Co. owner of vessel.
FISHER. W. L., 600, 706, 800.

FRANKLIN K. LANE.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 750, 800, 900.
FRED G. HARTWELL.—W. l., *715*, 800, 875; rates, Great Lakes service, 4 cents per word.
FRED W. WELLER.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 750, 800, 900.
GARGOYLE.—W. l., *600*, 706, 800.
GRATIA.—William F. Storey owner of vessel.
HADNOT.—Cities Service Transportation Co. owner of vessel.
HAWAIIAN.—W. l., *600*, 706, 800; controlled by owner of vessel.
HOG ISLAND.—Export S. S. Corporation owner of vessel.
INLAY.—W. l., *600*, 706, 800; controlled by I. W. T. Co.
INDIANA.—W. l., *715*.
JOHN A. KLINE.—Range, 200; system; Navy-Simon, 1,000; w. l., *715*, 800, 875; controlled by owner of vessel.
KNOXVILLE CITY.—W. l., *600*, 706, 800.
LAKE WINTHROP.—Name changed to Barbara; A. H. Bull, S. S. Co. owner of vessel.
LOUISIANA.—System, R. C. A., 1,000; w. l., *600*, 706, 800.
MAGMERIC.—W. l., add 450; Carolina S. S. Corporation owner of vessel; controlled by owner of vessel.
MARTINIQUE.—W. l., *600*, 706, 800.
MAUNA ALA.—W. l., *600*, 706, 800.
MAUNAWILI.—W. l., *600*, 706, 800; controlled by P. T. Co.
MIRRIANZA.—Name changed to Gulf of Venezuela; Gulf Refining Co. owner of vessel; controlled by I. W. T. Co. (U. S. L.).
M. J. SCANLON.—Name changed to Missoula.
MONTANAN.—Controlled by owner of vessel.
MOUNT HOPE.—W. l., *600*; service, P.
MUNCOVE.—W. l., *600*, 706, 800.
NEBRASKAN.—System, Navy-R. C. A., 1,000; w. l., 450, *600*, 706, 800.
NORTHWESTERN.—W. l., *600*, 706, 800.
OCTORARA.—W. l., *715*, 800, 875.
ORINOCO.—W. l., 450, *600*, 706, 800.
ORLEANS.—W. l., *600*, 706, 800.
OSSA.—W. l., 450, *600*, 706, 800; Export S. S. Corporation owner of vessel; controlled by I. W. T. Co.
PATRICK HENRY.—Controlled by R. C. A. (U. S. L.).
PRESIDENT JACKSON.—W. l., 450, *600*, 706, 800, 1,800, 2,100, 2,400.
PRESIDENT MCKINLEY.—Range, 150-500; w. l., *600*, 706, 800, 1,800, 2,100, 2,400.
PRINCETON.—W. l., *600*, 706, 800.
RELAY.—W. l., 450, *600*, 706.
RICHFIELD.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 750, 800, 900.
ROBERT E. HORTON.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 750, 800, 900.
ROBERT JOHNSON.—Range, 200; w. l., 600, 706, 800; controlled by P. T. Co.
SAGUACHE.—Controlled by I. W. T. Co. (U. S. L.).
SANGAMON.—W. l., *600*, 706, 800; Export S. S. Corporation owner of vessel; controlled by I. W. T. Co.
SAN JUAN (WWM).—Panama Mail S. S. Co. owner of vessel.
SANTA OLIVIA.—Name changed to Kansan; American-Hawaiian S. S. Co. owner of vessel.
SANTA TECLA.—W. l., *600*, 706, 800.
SCHOODIC.—W. l., 450, *600*, 706, 800.
SEA LION.—W. l., *600*, 706, 800.
SEVERANCE.—W. l., *600*, 706, 800; rates, 8 cents per word; controlled by I. W. T. Co.
SHICKSHINNY.—W. l., 450, *600*, 706, 800; Carolina S. S. Corporation owner of vessel; controlled by I. W. T. Co. (U. S. L.).
SIALIA.—System, composite v. t. telegraph; w. l., *715*, 800, 875.
SINNINAWA.—Export S. S. Corporation owner of vessel; controlled by I. W. T. Co.
SIR THOMAS SHAUGHNESSY.—Controlled by owner of vessel.
SOCONY 89.—Name changed to Rinco No. 1; Edward P. Farley & Co. owner of vessel.
SOCONY 90.—W. l., *600*, 706, 800.
SUPHENCO.—W. l., *600*, 706, 800.
TAMARACK IV.—System, composite v. t. telegraph; w. l., 115, *600*, 706.

TEXAN.—W. l., *600*, 706, 800.
TIDE.—W. l., *600*, 706, 800.
TIONESTA.—W. l., *715*, 800, 875.
TRADER.—Coastwise Navigation Corporation owner of vessel.
TULSA.—W. l., 450, *600*, 706, 800; Carolina S. S. Corporation owner of vessel; controlled by I. W. T. Co.
UNITED STATES.—System, R. C. A., 1000; w. l., *715*; rates, Great Lakes service, 4 cents per word.
VACUUM.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800.
VENEZUELA.—Panama Mail S. S. Co. owner of vessel.
VICTORIA.—W. l., *600*, 706, 800.
VIGILANT.—W. l., *600*, 706, 800; rates, 6 cents per word.
VOLUNTEER.—Controlled by R. C. A.
WAHKENNA.—Charles R. McCormick Lumber Co. owner of vessel.
WARBLER.—Controlled by I. W. T. Co.
W. B. KEENE.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800.
WEST CADRON.—Controlled by R. C. A.
WEST CARNIPAN.—Controlled by I. W. T. Co. (U. S. L.).
WEST CHATLA.—System, Navy—R. C. A., 1,000; w. l., *600*, 706, 800.
WEST GOTMOSKA.—System, Navy—R. C. A., 1,000; w. l., 450, *600*, 706, 800.
WEST ISLIP.—W. l., *600*, 706.
WEST KRATS.—Californian & Eastern S. S. Co., owner of vessel.
WEST NILUS.—W. l., *600*, 706, 800.
WEST NOSSKA.—Controlled by I. W. T. Co.
W. G. POLLOCK.—W. l., *715*, 800, 875.
WHITE CAP.—W. l., *600*, 706, 800.
WILLAMETTE.—Charles R. McCormick Lumber Co., owner of vessel.
WILLIAM G. MATHER.—Range, 300; system, Navy-Lowenstein, 1,000; w. l., *715*, 800, 875; controlled by owner of vessel.
WINSTON-SALEM.—W. l., 450, *600*, 706, 800.
WM. F. FITCH.—Controlled by owner of vessel.
Strike out all particulars of the following-named vessels: Butterfield, City of Panama, City of San Francisco, Hukey, Katherine, Lake Weir, Nuuanu, West Hesseltine.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS

KOZM, *read* Gulf of Venezuela; KQII, *read* Kansan; KSAA, *read* Ricco No. 1; KZAI, *read* Barbara; WAX, *read* Hialeah, Fla.; WIJ, *read* R. W. Stewart; WJAO, *read* Missoula; strike out all particulars following the call signals KDIW, KFZA, KFZB, KIFC, KIJS, KOTN, KZBB, KZBC, WJF, WJJ.

BROADCASTING STATIONS, BY CALL SIGNALS

(Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1926)

KFAB (Lincoln, Nebr.).—Power, 1,000; w. l., 340.7, fy. ke., 880.
KFAD (Phoenix, Ariz.).—Owner of station, Electrical Equipment Co. and McArthur Brothers Mercantile Co.
KFLR (Albuquerque, N. Mex.).—Power, 100.
KFUJ (Breckenridge, Minn.).—Owner of station, Hoppert Plumbing & Heating Co. and F. H. Rettig.
KFVU (Eureka, Calif.).—Owner of station, Standard Publishing Co., 537 G Street.
KFXF (Colorado Springs, Colo.).—Fy. ke., 1,200.
KOB (State College, N. Mex.).—Power, 1,000.
KWKH (Kennonwood, La.).—W. l., 261, fy. ke., 1,150.
WABC (Asheville, N. C.).—Power, 20.
WADC (Akron, Ohio).—Power, 500.
WAFD (Port Huron, Mich.).—W. l., 275, fy. ke., 1,000.
WBAP (Fort Worth, Tex.).—Power, 1,500.
WBRE (Wilkes-Barre, Pa.).—Power, 100.
WCBH (Oxford, Miss. (near)).—Power, 50.
WCX-WJR (Pontiac, Mich.).—Power, 2,500.
WDAD (Nashville, Tenn.).—Fy. ke., 1,330.
WEAF (New York, N. Y.).—Power, 5000.
WEAH (Wichita, Kans.).—Power, 50.

WEAJ (Vermilion, S. Dak.).—Correct orthography, Vermillion, S. Dak.
WEAN (Providence, R. I.).—Power, 500.
WEBD (Anderson, Ind.).—Power, 15.
WEBZ (Savannah, Ga.).—Power, 5.
WENR (Chicago, Ill.).—Address, 4201 Belmont Avenue.
WFKB (Chicago, Ill.).—Power, 500.
WGAZ (South Bend, Ind.).—Call signal changed to WSBT.
WGY (Schenectady, N. Y.).—Power, 4000.
WHBL (Logansport, Ind.).—Address, 1214 A Avenue.
WJAG (Norfolk, Nebr.).—Power, 200.
WJBB (St. Petersburg, Fla.).—W. l., 254, fy. kc., 1180.
WKAV (Laconia, N. H.).—W. l., 224, fy. kc., 1340.
WKRC (Cincinnati, Ohio).—Address, 507 E. Pearl Street.
WOK (Chicago Heights, Ill.).—Change to Homewood, Ill.
WSMH (Owosso, Mich.).—Power, 20.
WTAM (Cleveland, Ohio).—Power, 3500.
WTAS (Elgin, Ill. (near)).—Power, 2500.
WWAD (Philadelphia, Pa.).—Power, 250.
Strike out all particulars of the following-named stations: KFAF (Denver, Colo.); KFLP (Cedar Rapids, Iowa); WABI (Bangor, Me.); WGBA (Baltimore, Md.); WGBL (Elyria, Ohio); WJBD (Ashland, Wis.); WSAV (Houston, Tex.); WSRF (Broadlands, Ill.)

GOVERNMENT LAND STATIONS, ALPHABETICALLY BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1925, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

BOSTON, MASS. (NAD).—W. l., 1363.
SALT LAKE CITY, UTAH.—Call signal changed to KGD.

GOVERNMENT SHIP STATIONS, ALPHABETICALLY BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1925, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

SHENANDOAH (airship).—Strike out all particulars.

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS

KDEH, changed to KGD, strike out all particulars following NERK.

SPECIAL LAND STATIONS, BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1925]

NEW YORK, N. Y. (2XV).—Change to Brooklyn, N. Y., controlled by Robert M. Lacey and James Bergner, 1421 E. Tenth Street.
Strike out all particulars of the following-named stations: Altadena, Calif. (6XR); Ames, Iowa (9XBB); Anoka, Minn. (9XQ); Buffalo, N. Y. (8XAD); Butte, Mont. (7XM); Canton, N. Y. (8XF); Charlerol, Pa. (8XM); Cincinnati, Ohio (8XAV); Columbus, Ohio (8XJ); Columbus, Ohio (8XR); Dearborn, Mich. (8XAN); Dearborn, Mich. (Maiden Dearborn II—airplane—8XAM); Essex, Mont. (7XAN); Glacier Park, Mont. (7XAM); Glastonbury, Conn. (1XAQ); Gloucester, Mass. (1XI); Granville, Ohio (8XW); Hamilton, Ohio (8XAG); Hollywood, Calif. (6XAV); Lansing, Mich. (8XBB); Los Angeles, Calif. (6XD); Los Angeles, Calif. (6XK); Los Angeles, Calif. (6XP); Minneapolis, Minn. (9XBI); Minneapolis, Minn. (9XL); Oakalnd, Calif. (6XAM); Oberlin, Ohio (8XT); Providence, R. I. (1XX); San Diego, Calif. (6XAI); Santa Monica, Calif. (6XAG); Stanford University, Calif. (6XH); Summit, Mont. (7XAK); Washington, D. C. (3XO); Whitefish, Mont (7XAL); Wilkinsburg, Pa. (8XV); Worcester, Mass. (1XS).

USE OF 300 AND 450 METERS RESTRICTED BY GREAT BRITAIN

The British Government has informed this Government that all ships registered in Great Britain and Northern Ireland, from October 1, this year, will be prohibited from using the wave lengths of 300 and 450 meters within 250 miles of the coast of the United States on condition that the United States will from October

similarly prohibit its ships from using these wave lengths within 250 miles of the coast of the United Kingdom.

The department has signified that it is agreeable to the conditions indicated and accordingly all radio operators of United States vessels are not allowed the use of these wave lengths, effective October 1, when within 250 miles of the coasts of the United Kingdom, or of the United States.

NEW INSTALLATIONS OF RADIOCOMPASS

The following-named vessels have been equipped with radiocompass: All America (KDWF), Warwick (KESX), Magnolia (lighthouse tender—WWCY).

CHANGE IN CAPE HENRY RADIO FOG-SIGNAL TRANSMITTER

On September 8, this year the radio fog-signal spark transmitter at Cape Henry Lighthouse, entrance to Chesapeake Bay, Va., was replaced by a 1,000-watt A. C. modulated C. W. transmitter. The wave length of 1,000 meters and the signal characteristic, two dots, one dash, repeated for 20 seconds, silent 15 seconds, have not been changed. This signal will operate continuously in thick weather, also daily in clear weather from 9 to 9.20 a. m. and 3 to 3.30 p. m., eastern standard time.

The Lighthouse Service will appreciate reports from masters of vessels, having occasion to use this radio fog signal, as to its efficiency, range, etc. Address communications to the Commissioner of Lighthouses, Washington, D. C., or to the Superintendent of Lighthouses, Baltimore, Md.

REGULATIONS REGARDING USE OF RADIO IN FRENCH WATERS

The Director for Europe of the United States Shipping Board, Fleet Corporation, has informed this office that on August 24 this year, a decree was issued containing new rules for the use of radiotelegraphy on board ships and aircraft in or above French waters. The principal points interesting foreign ships may be summed up as follows:

Outside harbors and roads, the use of pure unmodulated continuous wave is free, the use of other waves is subject to general precautions, i. e., avoiding interference; limitation to strictly necessary duration; 600-meter wave is reserved for distress signals and 900 meters for the use of aircraft; authority to be asked of the senior naval officer when French men-of-war are in the neighborhood.

In ordinary harbors and roads, merchant ships can use radiotelegraphy only when necessary because they have no communication with the shore or because no other kinds of telegraphy are available, and only for messages dealing with the ship's voyage and operation. Men-of-war and military aircraft can use radiotelegraphy subject to general precautions as mentioned above; merchant aircraft may use radiotelegraphy or radiotelephony for their safety or for the requirements of their voyage only.

In roads of military harbors, warships and military aircraft must obtain the senior naval officer's authority. Merchant ships may ask for it only for the above-mentioned reasons; if after being called twice for that purpose at a five minutes' interval the next land station does not answer, this means that authority has been granted. Civil aircraft may use radiotelegraphy only for their safety.

Inside naval harbors the rules are about the same, but merchant ships can not use their apparatus at all. Short emissions for regulating apparatus may be authorized on request in most cases.

PORTLAND, ME., WEATHER BROADCASTS TRANSFERRED TO BOSTON

The broadcasting of weather information from the naval radio station at Cape Elizabeth, Me. (NAP–Portland) has been discontinued. This weather information consisting of the 8 a. m. barometric pressure, state of weather, wind direction and velocity at Portland, Me., and forecasts and storm warnings for the Maine coast (Eastport to Portsmouth) has been added to the broadcast made from the naval radio station at Boston, Mass. These broadcasts are made daily, including Sundays and holidays, on a wave length of 1,363 meters, at 11 a. m., seventy-fifth meridian time, supplemented by a broadcast at 5 p. m. whenever any storm warnings or advices are issued in the afternoon. (See Weather Bureau circular No. 13–Radio, July 15, 1925, which should be amended accordingly.)